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December 21, 1998

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

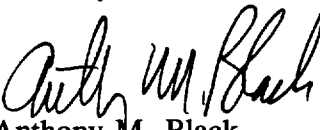
Magalie Roman Salas, Esq.
Secretary
Federal Communications Commission
1919 M. Street, Room 222
Washington, D.C. 20554

Dear Ms. Salas:

Enclosed for filing are an original and eight copies of the Reply Comments of Panamsat Corporation in response to the Commission's Notice of Proposed Rulemaking issued on September 18, 1998.¹ Also enclosed is an additional copy that I would appreciate your date-stamping and returning to me with the messenger.

Thank you for your kind assistance.

Sincerely,


Anthony M. Black

Enclosures

No. of Copies rec'd 078
List ABCDE

¹ Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz band 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use, Notice of Proposed Rulemaking, IB Docket No. 98-172, RM-9005, RM-9118 (rel. Sept. 18, 1998).

**Before the
Federal Communications Commission
Washington, D.C. 20554**

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	
)	
Redesignation of the 17.7-19.7 GHz Frequency)	
Band, Blanket Licensing of Satellite)	IB Docket No. 98-172
Earth Stations in the 17.7-20.2 GHz and)	RM-9005
27.5-30.0 GHz Frequency Bands, and the)	RM-9118
Allocation of Additional Spectrum in the)	
17.3-17.8 GHz and 24.75-25.25 GHz Frequency)	
Bands for Broadcast Satellite-Service Use)	

REPLY COMMENTS OF PANAMSAT CORPORATION

PanAmSat Corporation ("PanAmSat"), by its attorneys, submits these Reply Comments in response to the initial comments filed pursuant to the Notice of Proposed Rulemaking issued in the above-captioned docket on September 18, 1998 ("the NPRM").

In these Reply Comments PanAmSat addresses issues relating to both redesignation of the 18 GHz band and blanket licensing. With respect to band segmentation, PanAmSat continues to recommend that the Commission allow an industry working group to negotiate a consensus redesignation plan. However, if the Commission determines that it must immediately adopt a particular redesignation plan, then PanAmSat proposes a plan that the Commission should adopt as an alternative to the Commission's proposed plan. As for blanket licensing, PanAmSat similarly proposes that the Commission either adopt PanAmSat's recommendations on certain issues or allow the Blanket Licensing Group to resolve those issues through further discussions.

I. Band Segmentation Issues

A. Summary

The initial comments filed by various GSO/FSS, NGSO/FSS and terrestrial parties show that no redesignation plan will easily satisfy all interests. It is obvious that any band plan that the Commission adopts will require changes in existing terrestrial uses of the 18 GHz band. The Commission therefore should adopt a band plan that both provides adequate primary spectrum for GSO/FSS licensees and gives terrestrial users a reasonable amount of time, and compensation in limited circumstances, to relocate. To achieve that result, PanAmSat recommends that the Commission either allow an industry working group to continue to negotiate a consensus band plan or adopt the band plan proposed in the reply comments of Hughes Electronics, Inc. In any event, the Commission should reject the unreasonable band plan supported by terrestrial commenters.

B. The Commission Should Either Allow an Industry Working Group to Continue to Negotiate a Consensus Band Plan or Adopt the Redesignation Plan Proposed by Hughes Electronics, Inc., Including Limited Grandfathering and Reasonable Relocation Rules.

The Commission correctly recognized more than two years ago in the 28 GHz proceeding, and GSO/FSS parties reaffirmed in their initial comments in the instant proceeding, that GSO/FSS licensees need a minimum of 1000 MHz of downlink spectrum for primary use in the 18 GHz band.¹ PanAmSat agrees with the Commission's conclusion that

¹ See Comments of PanAmSat Corporation at 2-3 (filed Nov. 19, 1998) (citing In re Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, First Report and Order and Fourth Notice of Proposed Rulemaking, CC Docket (continued...))

the Commission should now modify the 1996 designations in order to separate terrestrial and satellite operations in the 18 GHz band. To achieve that result, however, the Commission should not sacrifice the required 1000 MHz of GSO/FSS primary use spectrum. PanAmSat believes that, by adopting the appropriate grandfathering and relocation rules, the Commission can redesignate the 18 GHz band in a manner that will both preserve 1000 MHz of sole primary spectrum for GSO/FSS licensees and satisfy the needs of terrestrial users.

PanAmSat recommended in its initial comments, and continues to recommend, that the Commission allow an industry working group to continue to negotiate an agreeable band redesignation plan. However, if the Commission concludes that it must adopt a band redesignation plan immediately, then PanAmSat recommends that the Commission adopt the band redesignation plan proposed in the reply comments filed by Hughes Electronics, Inc. ("the Hughes Proposal"). The Hughes Proposal preserves 1000 MHz for GSO/FSS licensees, yet reasonably accommodates the needs of other licensees in the 18 GHz band. Specifically, the Hughes Proposal designates 500 MHz for GSO/FSS primary use at 18.1-18.6 GHz, in addition to the existing 500 MHz at 19.7-20.2 GHz. NGSO/FSS would be designated 500 MHz at 18.8-19.3 GHz as proposed by the Commission. Terrestrial fixed service would be designated a total of 500 MHz of spectrum at 17.8-18.1 GHz and 18.6-18.8

¹(...continued)

No. 92-297 (rel. July 22, 1996); Comments of the Spectrum and Orbit Utilization Section, Satellite Communications Division of the Telecommunications Industry Association ("TIA-SOUS") at 4 (filed Nov. 19, 1998); Comments of Capitol Broadcasting Co., Inc., Attachment at 2 (filed Nov. 19, 1998); Comments of GE American Communications, Inc. ("GE Americom") at 6-11 (filed Nov. 19, 1998); Comments of Hughes Electronics, Inc. ("Hughes") at 4-8 (filed Nov. 19, 1998); Comments of Lockheed Martin Corporation ("Lockheed") at 2-4 (filed Nov. 19, 1998); Comments of KaStar Satellite Communications Corp., et al. ("KaStar") at 7 (filed Nov. 19, 1998).

GHz and an additional 400 MHz of co-primary spectrum shared with MSS feeder links at 19.3-19.7 GHz. The 17.7-17.8 GHz band would be designated for BSS.

Almost all GSO/FSS commenters agree that at least 1000 MHz of spectrum must be designated for exclusive use by GSO/FSS in the 18 GHz band.² The Hughes Proposal achieves that result more effectively than other GSO/FSS proposals³ because it designates 1000 MHz for GSO/FSS, yet allows GSO/FSS to avoid the power flux density ("PFD") limits at 18.6-18.8 GHz that are incompatible with the ubiquitous deployment of small earth stations. Although the NPRM proposes to designate the 18.55-18.8 GHz band for primary use by GSO/FSS, that proposal was premised on the plan of a single GSO/FSS licensee, Lockheed, to use coordinated gateway earth stations to avoid conflict with the PFD limits at 18.6-18.8 GHz.⁴ Even Lockheed, however, no longer plans to use gateway terminals and has applied to modify its plan in order to ubiquitously deploy small terminals in the full 1,000 MHz available for GSO/FSS use in the Ka-band.⁵ Although relaxation of the PFD limits at 18.6-18.8 GHz is being considered as Lockheed states,⁶ the Commission should not adopt a band plan that relies on the 18.6-18.8 GHz band for any portion of the required 1000

² See TIA-SOUS Comments at 4; Capitol Broadcasting Comments, Attachment at 2; GE Americom Comments at 6-11; Hughes Comments at 4-8; Lockheed Comments at 2-4; KaStar Comments at 7.

³ See TIA-SOUS Comments at 4; KaStar Comments at 7; Lockheed Comments at 2-7; Loral Comments at 3; Pegasus Comments at 3-7.

⁴ NPRM ¶ 32.

⁵ Lockheed Comments at 3.

⁶ Id. at 3-4.

MHz of exclusive GSO/FSS spectrum unless the Commission simultaneously relaxes those PFD limits.

Any proposal that the Commission could reasonably adopt, including the Hughes Proposal, will require relocation of some terrestrial services. Permanent grandfathering of terrestrial services would ultimately benefit neither the grandfathered terrestrial service nor the redesignated primary satellite service. The Commission therefore should adopt limited grandfathering and relocation compensation rules that promote efficient use of the 18 GHz band.

PanAmSat generally agrees with Teledesic's proposal for conditional, phased-out grandfathering of terrestrial services that currently exist in bands that will be redesignated for exclusive use by satellite services.⁷ Such grandfathering should apply only to terrestrial systems licensed prior to the date of the NPRM. The grandfathered status should sunset after a phaseout period of no longer than five years, and any requirement for compensation of relocated terrestrial users should gradually diminish and then terminate at the end of the phaseout period. During the five-year phaseout period, the Commission should encourage terrestrial services to relocate outside the 18 GHz band if necessary to facilitate redesignation of the 18 GHz band and to ensure optimal use of available spectrum.⁸ PanAmSat strongly objects to any grandfathering or compensation requirements that do not phase down and

⁷ See Comments of Teledesic LLC at 11-21 (filed Nov. 19, 1998).

⁸ See TIA-SOUS Comments at 5 (recommending that CARS users in the 18.3-18.58 GHz band be authorized to migrate to the lower CARS band at 13 GHz); Teledesic Comments at 8 (suggesting relocation of CARS operations to the 12.7-13.25 GHz band); Comments of Winstar Communications, Inc. at 14 (filed Nov. 19, 1998) (proposing relocation of 18 GHz band incumbents to the 24-25 GHz band).

completely terminate within a five year period, particularly given the lack of information in the record regarding the number and location of CARS and other incumbent licensees in the bands that must be designated for exclusive use by GSO/FSS.

C. The Commission Should Reject the Unreasonable Band Segmentation Proposals Supported by Terrestrial Interests.

Most of the terrestrial comments indicate that they support a band redesignation proposal described in the initial comments of the Fixed Point-to-Point Communications Section, Wireless Communications Division of the Telecommunications Industry Association ("the TIA FFTP Proposal").² The TIA FFTP proposal would effectively reduce the GSO/FSS designation from 1000 MHz to a mere 500 MHz. While the TIA FFTP Proposal may be ideal from the narrow perspective of terrestrial fixed services, it fails to offer a realistic band redesignation plan that the Commission could adopt.

Under the TIA FFTP Proposal, the 500 MHz at 19.7-20.2 GHz would be the only spectrum truly available for primary use by GSO/FSS. The TIA FFTP Proposal purports to allocate an additional 220 MHz at 18.58-18.8 GHz, for a total of only 720 MHz of spectrum for primary use by GSO/FSS.¹⁰ However, as discussed above, the 18.6-18.8 GHz band cannot be used for ubiquitous deployment of small earth stations because of the power flux

² See Comments of the Fixed Wireless Communications Coalition at 6 (filed Nov. 19, 1998); Comments of the Association of American Railroads at 3 (filed Nov. 19, 1998); Comments of GTE at 7-8 (filed Nov. 19, 1998); Comments of the Independent Cable and Telecommunications Association at 17 (filed Nov. 19, 1998). The following comments indicate support for the band segmentation proposal of the Fixed Wireless Communications Coalition, which in turn supports the TIA FFTP Proposal: Comments of the Wireless Communications Association International, Inc. at 4-5 (filed Nov. 19, 1998); Comments of UTC at 4 (filed Nov. 19, 1998).

¹⁰ TIA FFTP Section Comments at 4.

density ("PFD") limits that currently exist in that band.¹¹ Also, by cutting off 30 MHz of the 18.55-18.8 GHz band, the TIA FFTP Proposal would render that band unusable to GSO/FSS systems that use downlinks that require a minimum of 250 MHz.¹² The TIA FFTP Proposal also includes permanent grandfathering of incumbent licensees in the 18.58-18.82 GHz and 18.92-19.16 GHz bands (which is unacceptable for reasons already discussed), even though TIA FFTP acknowledges that permanent grandfathering is not a workable solution.¹³ In summary, the TIA FFTP Proposal is well designed to protect existing terrestrial interests, but it provides the Commission no guidance in reaching an acceptable compromise band plan.

II. Blanket Licensing Issues

A. The Commission Should Not Attempt to Apply Blanket Licensing Requirements to U.S. Operators Outside of The United States

The report filed by the GSO-satellite-only blanket licensing working group ("Blanket Licensing Group" or "BLG") contains the following recommendation:

The requirement to comply with the blanket licensing limits (or otherwise coordinate) exists for all U.S.-licensed satellite operators, regardless of the orbital location of the satellite (i.e., whether in the "domestic arc" or the "international arc") and should extend to all satellite operators granted access to the U.S. market. To the extent any such operators seek to operate any earth station(s) with parameters in excess of the blanket licensing requirements, such earth stations would not be eligible for blanket licensing and would instead be licensed on an individual basis.¹⁴

¹¹ See NPRM ¶¶ 32, 34.

¹² See Lockheed Comments at 6.

¹³ TIA FFTP Comments at 7-12.

¹⁴ Report of the GSO Ka-Band Blanket Licensing Industry Working Group at 5 (filed Nov. 19, 1998) ("BLG Report").

This recommendation could cause the Commission to apply the technical requirements for blanket licensing in a manner that is inappropriate and harmful to U.S. FSS licensees that operate outside the U.S.

The Commission's past policies for blanket licensing have been instrumental in fostering the development of FSS links and services throughout the United States. An operator's ability to provide near instantaneous service without undue regulatory delay has been vital to the construction and operation of Very Small Aperture Terminal ("VSAT") data networks for a wide variety of industry segments. Blanket licensing in the FSS band has been successful because the technical operating characteristics of all spacecraft operating in the domestic arc are also governed by the Commission. The Commission's rules under Part 25 have resulted in a near uniform spacecraft design for those operators providing service over the United States. Accordingly, an earth station authorized under a blanket license will not be exposed to unexpected technical operations from a neighboring satellite or unrelated service operating in the same band.

This environment, however, does not exist in the international arena. No other operating region is subject to specific guidance such as that which the Commission has provided in the development of the U.S. domestic FSS bands. Indeed, present ITU rules encourage systems tailored for specific applications using a wide variety of technical characteristics. Present ITU rules also encourage Administrations (and their individual operators) to coordinate use on a case-by-case basis. In the present FSS C- and Ku-bands, it is virtually impossible outside the U.S. to use a single earth station design specification or

operating characteristic because of variations in technical constraints such as intersatellite spacing, satellite receive and transmit power levels, and local terrestrial interference levels.

In view of the above conditions, it is simply unrealistic for the Commission to impose technical operational requirements on systems operating outside the U.S. Further, such imposition of U.S. requirements would serve no real purpose since each Administration will likely have its own licensing procedures. Even in cases where two U.S. satellites are near each other over some other portion of the globe, local factors may necessitate operation at variance with the blanket license requirements. Given the wide diversity of Ka-band system designs and ITU filings that already exist, Ka-band operators will likely find themselves in the same situations outside the U.S. as exist today in other FSS bands. Also, even if two U.S.-licensed operators were near one another over some other portion of the globe, non-U.S. systems, employing much different designs, would likely be nearby as well.

For the foregoing reasons, the Commission should not attempt to impose specific technical restrictions contained in the blanket license provisions on Ka-band earth stations used outside the United States. The absence of such restrictions will permit licensees to coordinate specific uses more efficiently on a country-by-country basis with nearby systems operating under substantially different parameters.

B. The Commission Should Permit Inter-System Coordination and Enforce the Agreements Reached

PanAmSat agrees with the GSO Blanket Licensing Group's recommendation to allow licensees to exceed the blanket licensing requirements pursuant to coordination agreements

with satellite operators affected by the exceedence.¹⁵ However, PanAmSat strongly objects to the recommendation that any such coordination agreement would be nullified if the Commission reassigned one of the orbit locations involved in the agreement to another licensee.¹⁶ This recommendation, if adopted, could have a devastating effect on the satellite industry.

Past and current ITU policies have fostered the widespread use of bilateral inter-system coordinations, whereby operators located near one another reveal technical information concerning their respective systems and agree to operate in a manner that provides mutual interference protections. These coordination agreements are vital to the satellite industry because satellite operators rely on them in investing hundreds of millions of dollars to design, build, launch, and operate systems. The very stability of the satellite industry depends on the commitment of governments to enforce and uphold the coordinations established in these agreements.

Under present FCC practice, U.S. operators report coordination agreements to the Commission and international operators report the agreements to their respective governmental bodies. Licensees are then obligated to maintain all future parameters within the limits contained in the agreements. This is a key feature of the arrangement, as it provides the certainty that satellite operators must have before building large networks which require investments of hundreds of millions of dollars. Any Commission action that eroded this certainty would completely undermine the development of satellite based networks. It

¹⁵ BLG Report at 4.

¹⁶ Id.

would also penalize satellite operators who have relied in good faith on government commitments to honor restrictions on a particular orbital location, only to have their systems shut down by a new licensee. PanAmSat urges the Commission to reject the GSO Blanket Licensing Group's proposal on this issue for the reasons stated above and in the Initial Comments of GE Americom.¹⁷

C. NGSO/FSS Blanket Licensing

Motorola proposes that the Commission allow blanket licensing of NGSO/FSS systems in the 19.7-20.2 and 29.5-30.0 GHz bands, which are designated for primary use by GSO/FSS.¹⁸ Motorola states that provisional equivalent power flux density ("EPFD") and aggregate power flux density ("APFD") limits to be adopted at the World Radiocommunication Conference in the year 2000 ("WRC-00") will allow NGSO/FSS systems to operate in these bands without causing interference to GSO/FSS systems in the 19.7-20.2 GHz and 29.5-30.0 GHz bands. Motorola states, "[B]y definition, so long as an NGSO FSS system's APFD and EPFD remain below [the limits permitted under Article S22 and Annex 1 of Resolution 130 (WRC-97)], it will not cause unacceptable interference to GSO/FSS systems."¹⁹

Motorola overstates the effect of NGSO/FSS compliance with the provisional ITU APFD and EPFD limits. A secondary NGSO/FSS system's mere compliance with those limits does not guarantee non-interference to a primary GSO/FSS system. As PanAmSat

¹⁷ GE Americom Comments at 12.

¹⁸ Lockheed Comments at 3-7.

¹⁹ Id. at 7.

stated in its Initial Comments, an applicant for any secondary use should be required to submit a detailed non-interference test plan, with actual testing required at the option of a primary user whose operation could be adversely affected by the proposed secondary use.²⁰ The secondary applicant should bear a strict burden to show that the proposed secondary use clearly will not cause interference to the existing primary GSO/FSS system or any future system that would likely be affected. This requirement should apply notwithstanding an NGSO/FSS system's compliance with the ITU APFD and EPFD limits to which Motorola refers. If the Commission ultimately permits such secondary use of GSO/FSS primary spectrum by NGSO/FSS operators, then the Commission should consider similarly allowing GSO/FSS operators to use on a secondary basis spectrum designated for primary use by NGSO/FSS operators.

CONCLUSION

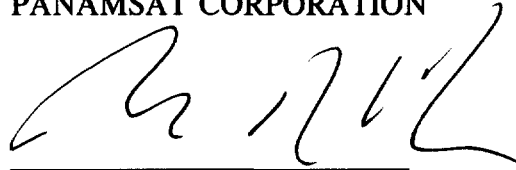
PanAmSat recommends that the Commission allow an industry working group to continue to negotiate a consensus 18 GHz band redesignation plan. If the Commission determines that it must adopt a redesignation plan immediately, then PanAmSat recommends that the Commission adopt the redesignation plan described above. The Commission should similarly allow the GSO Blanket Licensing Group to analyze flaws in the BLG Report that PanAmSat describes above and in its Initial Comments. The Commission should not adopt GSO/FSS blanket licensing rules unless those flaws are resolved in accordance with PanAmSat's recommendations. Finally, any secondary NGSO/FSS use of GSO/FSS primary bands should be subject to strict noninterference requirements as described above. If the

²⁰ Comments of PanAmSat Corporation at 6 (filed Nov. 19, 1998).

Commission allows NGSO/FSS operators to use on a secondary basis spectrum designated for primary use by GSO/FSS operators, then the Commission should consider allowing GSO/FSS operators to use on a secondary basis spectrum designated for primary use by NGSO/FSS operators.

Respectfully submitted,

PANAMSAT CORPORATION

A handwritten signature in black ink, appearing to read 'R. Gibbon', is written over a horizontal line.

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